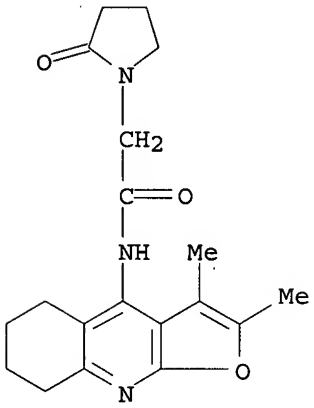
L5 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
RN 135463-81-9 REGISTRY
ED Entered STN: 09 Aug 1991
CN 1-Pyrrolidineacetamide, 2-oxo-N-(5,6,7,8-tetrahydro-2,3-dimethylfuro[2,3-b]quinolin-4-yl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Furo[2,3-b]quinoline, 1-pyrrolidineacetamide deriv.
OTHER NAMES:
CN Coluracetam
CN MKC 231
MF C19 H23 N3 O3
SR CA
LC STN Files: ADISINSIGHT, BIOSIS, BIOTECHNO, CA, CAPLUS, CIN, EMBASE, IMSDRUGNEWS, IMSRESEARCH, MEDLINE, PHAR, PROMT, PROUSDDR, SCISEARCH, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

14 REFERENCES IN FILE CA (1907 TO DATE)
14 REFERENCES IN FILE CAPLUS (1907 TO DATE)

FILE 'HOME' ENTERED AT 15:20:55 ON 29 JAN 2007

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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STRUCTURE FILE UPDATES: 28 JAN 2007 HIGHEST RN 918629-37-5
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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

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http://www.cas.org/ONLINE/UG/regprops.html

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L1 STRUCTURE UPLOADED

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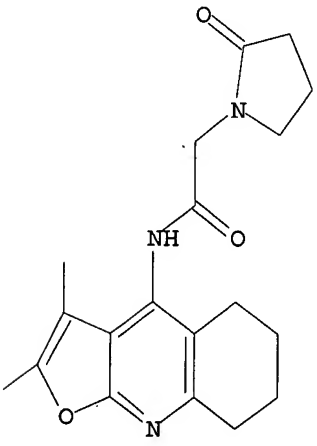
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

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SAMPLE SCREEN SEARCH COMPLETED - 0 TO ITERATE

100.0% PROCESSED 0 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 0 TO 0
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA FAM SAM L1

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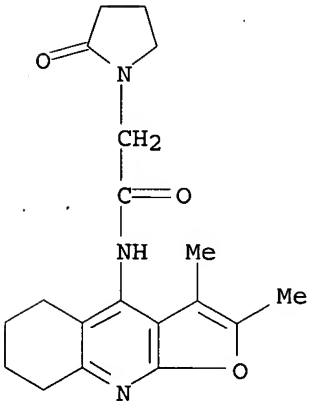
FULL SEARCH INITIATED 15:21:50 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 3 TO ITERATE

100.0% PROCESSED 3 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

L3 1 SEA FAM FUL L1

=> d scan

L3 1 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 1-Pyrrolidineacetamide, 2-oxo-N-(5,6,7,8-tetrahydro-2,3-dimethylfuro[2,3-b]quinolin-4-yl)- (9CI)
MF C19 H23 N3 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	68.15	68.36

FILE 'CAPLUS' ENTERED AT 15:22:17 ON 29 JAN 2007

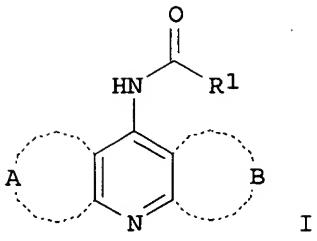
FILE COVERS 1907 - 29 Jan 2007 VOL 146 ISS 6
FILE LAST UPDATED: 28 Jan 2007 (20070128/ED)

=> s l3
L4 14 L3

=> d ti au abs so py 1-14

L4 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
TI "Lead Hopping". Validation of Topomer Similarity as a Superior Predictor of Similar Biological Activities
AU Cramer, Richard D.; Jilek, Robert J.; Guessregen, Stefan; Clark, Stephanie J.; Wendt, Bernd; Clark, Robert D.
AB Two extensive studies quantifying the ability of topomer shape similarity to forecast a variety of biol. similarities are described. In a prospective trial of "lead hopping", using topomer similarity for virtual screening and queries from the patent literature, biol. assays of 308 selected compds. (representing 0.03% of those available, per assay type) yielded 11 successful "lead hops" in the 13 assays attempted. The hit rate averaged over all assays was 39% ("activity" defined as inhibition ≥20% at 10 μM), significantly greater than an unexpectedly high neg. control hit rate of 15%. The average "Tanimoto 2D fingerprint similarity" between query and "lead hop" structures (0.36) was little more than the Tanimoto similarity between random drug-like structures. Topomer shape and Tanimoto 2D fingerprint similarities were also compared retrospectively, in their tendencies to concentrate together potential and actual drugs reported to belong to the same "activity class", for twenty classes. Among the most similar 3% of structures (corresponding to "≥0.85 Tanimoto" for these structures), an average of 62% of the topomer similar selection possessed a near neighbor belonging to the same activity class, roughly a one-third superiority over the "Tanimoto ≥ 0.85" selection containing 48% actives in avoiding false positives. Conversely, the least similar 75% of structures contained 0.3% actives for topomer similarity vs. 1.0% actives for Tanimoto 2D fingerprint similarity, a 3-fold superiority for topomers in avoiding false negatives.
SO Journal of Medicinal Chemistry (2004), 47(27), 6777-6791
CODEN: JMCMAR; ISSN: 0022-2623
PY 2004

L4 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
TI Fused pyridine derivative used as therapeutic agent for schizophrenia
IN Bessho, Tomoko; Takashina, Ken
GI



I

AB Disclosed is a drug that is useful for treating schizophrenia and cognitive dysfunction. In particular, disclosed is a therapeutic agent for schizophrenia comprising as an active ingredient a fused pyridine derivative (I), e.g. a 4-acylamino-5,6,7,8-tetrahydrofuro[2,3-b]quinoline derivative, or its optical enantiomorph or acid adduct salt, or a hydrate or solvate thereof, [wherein R1 = C2-6 alkyl, CH2NR2R3 [wherein R2 = H, acetyl; R2 = R3 = C1-6 alkyl, cycloalkyl, CH(R4)CO2R5 (R4, R5 = H, C1-6 alkyl)]; or NR2R3 together represents 2-oxopyrrolidin-1-yl, 1H-imidazol-1-yl, (un)substituted 2,4-dioxoimidazolidin-1-yl; A = (CH2)3, (CH2)4, CH:CHCH:CH, SCH:CH, CH:CH CH:N, CH:CHN:CH, each (un)substituted CH:CHS, CH:CHO, or N:CHO; B = (CH2)3, (un)substituted (CH2)4, or CHCH2CH2, N-(un)substituted CH2NHCH2CH2, etc.]. 2-(2-Oxopyrrolidin-1-yl)-N-(2,3-dimethyl-5,6,7,8-tetrahydrofuro[2,3-b]quinolin-4-yl)acetamide at 10 mg/kg in Wistar male rats significantly improved passive avoidance reaction.

SO PCT Int. Appl., 31 pp.
CODEN: PIXXD2

PY 2004
2004
2005
2006
2006

L4 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN

TI Preventives/remedies for cholinergic neuropathy

IN Takashina, Ken; Bessho, Tomoko

AB Preventives/remedies for cholinergic neuropathy which contain as the active ingredient a drug capable of increasing the choline transporter count on the cell membrane surface of cholinergic neurons or a drug capable of acting on intracellular localized changes in choline transporters and thus increasing the choline transporter count on the cell membrane surface. Thus, it becomes possible to provide drugs allowing epoch making administration on the basis of the drug effect mechanism (namely, administration twice or less per day without considering the blood half-time of the drug). Thus, the compliance of a patient with a need for the drug therapy can be improved and the load of a caregiver can be relieved.

SO PCT Int. Appl., 57 pp.
CODEN: PIXXD2

PY 2003
2003
2004
2004

L4 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN

TI Polymorph forms of n-(2,3-dimethyl-5,6,7,8-tetrahydrofuro[2,3-b]quinolin-4-yl)-2-(2-oxopyrrolidin-1-yl)acetamide

IN Yamabe, Haruko; Ishige, Takanori

AB The invention relates to novel polymorph crystal forms A and B of N-(2,3-dimethyl-5,6,7,8-tetrahydrofuro[2,3-b]quinolin-4-yl)-2-(2-oxopyrrolidin-1 yl)acetamide. The compds. and pharmaceutical compns. thereof are useful for activating a malfunctioned cholinergic neuron that is associated with memory loss disturbances.

SO PCT Int. Appl., 35 pp.

CODEN: PIXXD2
PY 2002
2002
2004
2004
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2005

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
TI 4-Acylaminotetrahydrofuro[2,3-b]quinoline derivatives for prevention and treatment of ischemic retinopathy and retinal and optic nerve injury
IN Togawa, Shunji; Mano, Tomiya; Yano, Shinji
AB 4-Acylaminotetrahydrofuro[2,3-b]quinoline derivs. and their salts are claimed for prevention and treatment of ischemic retinopathy and retinal and optic nerve injury. The neuroprotectant effects of 2-(2-oxopyrrolidin-1-yl)-N-(2,3-dimethyl-5,6,7,8-tetrahydrofuro[2,3-b]quinolin-4-yl)acetoamide against retinal injury were tested.
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
PY 2001

L4 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
TI MKC-231, Mitsubishi-Tokyo Pharmaceutical Inc
AU Chen, Yun
AB A review with 37 refs. Mitsubishi-Tokyo (formerly Mitsubishi Chemical), in collaboration with Takeda, is developing MKC-231, which is an acylaminopyridine high-affinity choline uptake facilitator, for the potential treatment of Alzheimer's disease (AD) and amnesia. MKC-231 was first reported to be in clin. trials in 1993. In Nov. 1999, it was in phase II for AD. Administration of MKC-231 resulted in significant improvements in a number of models of learning and memory disorders in rats. The mechanism of action of MKC-231 appears to be improvement of reduced acetylcholinergic nerve activity. Restoration of destruction to the basilar region of the forebrain was observed 24 h following administration of MKC-231, and acetylcholine content in the cerebral cortex increased. MKC-231 promoted the high-affinity uptake of choline in the nerve terminals and activated acetylcholinergic nerves by increasing acetylcholine synthesis. MKC-231 ameliorated the learning impairment of AF64-A-treated rats in the Morris water maze, and repeated administration of MKC-231 improved memory deficits in passive avoidance tests and reversed the decrease in acetylcholine content in rats with basal forebrain lesions produced by bilateral ibotenic acid injections.
SO Current Opinion in Central & Peripheral Nervous System Investigational Drugs (2000), 2(4), 461-466
CODEN: COCDFA; ISSN: 1464-844X
PY 2000

L4 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
TI MKC-231 for treatment of Alzheimer's disease
AU Takashina, Ken
AB A review, with 2 refs., on the prehistory of development of the choline uptake enhancer MKC-231 and its pharmacol. properties.
SO Rinsho to Yakubutsu Chiryo (2000), 19(1), 29-32
CODEN: RYCHEI; ISSN: 0913-7505
PY 2000

L4 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN
TI Central nervous system-mediated hyperglycemic effects of NIK-247, a cholinesterase inhibitor, and MKC-231, a choline uptake enhancer, in rats
AU Uemura, Kazumasa; Yoshioka, Shuko; Surina-Baumgartner, Denise M.; Tamagawa, Tatsuo; Miura, Hisayuki; Ueda, Muneto; Tamaya, Norika; Iguchi, Akihisa; Hotta, Nigishi
AB We investigated the effects of intracerebroventricular administration of

NIK-247 (9-amino-2,3,5,6,7,8-hexahydro-1H-cyclo-penta(b)-quinoline monohydrate hydrochloride; a cholinesterase inhibitor) or MKC-231 (2-(2-oxypyrrolidin-1-yl)-N-(2,3-dimethyl-5,6,7,8-tetrahydrofuro[2,3-b]quinolin-4-yl) acetoamide; a choline uptake enhancer) on plasma glucose level in comparison with that of neostigmine administration in rats. The extents of NIK-247- and MKC-231-induced hyperglycemia were considerably less than that by neostigmine, suggesting that the potencies of the drugs to produce the peripheral hyperglycemia may be pharmacol. negligible.

SO Japanese Journal of Pharmacology (1999), 79(1), 113-115
CODEN: JJPAAZ; ISSN: 0021-5198

PY 1999

L4 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN

TI Protective effect of MKC-231, a novel high affinity choline uptake enhancer, on glutamate cytotoxicity in cultured cortical neurons

AU Akaike, Akinori; Maeda, Takehiko; Kaneko, Satoshi; Tamura, Yutaka

AB The neuroprotective action of MKC-231, which enhances choline uptake and acetylcholine release in the central nervous system, was studied in vitro. Glutamate neurotoxicity was assessed with cortical cultures obtained from fetal rats. Exposure of cultures to MKC-231 for 12-24 h ameliorated the glutamate cytotoxicity. MKC-231 reduced the cytotoxicity induced by ionomycin, a calcium ionophore, but did not affect the cytotoxicity induced by S-nitrosocysteine, a nitric oxide (NO) donor. MKC-231 may protect against glutamate neurotoxicity by suppressing the NO formation triggered by Ca2+-influx.

SO Japanese Journal of Pharmacology (1998), 76(2), 219-222
CODEN: JJPAAZ; ISSN: 0021-5198

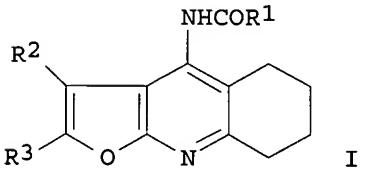
PY 1998

L4 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN

TI Acyltetrahydrofuroquinoline derivs. for prevention and treatment of mental disorders from impairment of brain cholinergic system

IN Saito, Kenichi; Betsusho, Tomoko; Chaki, Haruyuki; Egawa, Mitsuo

GI



I

AB 4-Acyltetrahydrofuro[2,3-b]quinoline derivs. (I; R1 = C2-C6 alkyl; R2 and R3 = H or C1-C4 alkyl; R4 = H or C1-C6 alkyl) and their pharmaceutical-acceptable salts are claimed for prevention and treatment of mental disorders from impairment of brain cholinergic system such as parkinsonism, Huntington's disease, Dawn syndrome, myasthenia gravis, glaucoma, and delayed exercise injury. 2-(2-Oxopyrrolidin-1-yl)-N-(2,3-dimethyl-5,6,7,8-tetrahydrofuro[2,3-b]quinolin-4-yl) acetoamide improved water-maze memory impairment in rats.

SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF

PY 1996

L4 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN

TI Effect of the novel high affinity choline uptake enhancer 2-(2-oxopyrrolidin-1-yl)-N-(2,3-dimethyl-5,6,7,8-tetrahydrofuro[2,3-b]quinolin-4-yl)acetamide on deficits of water maze learning in rats

AU Bessho, Tomoko; Takashina, Ken; Tabata, Reiko; Ohshima, Chieko; Chaki, Haruyuki; Yamabe, Haruko; Egawa, Mitsuo; Tobe, Akihiro; Saito, Ken-Ichi

AB The pharmacol. properties of the title drug MKC-231 in comparison with an

acetylcholinesterase (AChE) inhibitor, tacrine were studied. MKC-231(10-10-10-6 mol/l) significantly increased high affinity choline uptake (HACU) when it was incubated with the hippocampal synaptosomes of ethylcholine mustard aziridinium ion (AF64A) treated rats, but not of normal rats. MKC-231 did not affect the AChE activity, [3H]-quinuclidinyl benzilate binding, and [3H]-pirenzepine binding. Oral administration of MKC-231 (1-10 mg/kg) significantly improved the learning deficits in the Morris water maze of AF64A-treated rats, but it did not produce any significant side effects, like tremor, salivation or hypothermia, which were observed in rats treated with high doses of tacrine. Tacrine (0.1-3 mg/kg p.o.) failed to ameliorate the learning deficits in AF64A-treated rats. These results suggest that MKC-231 is a novel and quite unique compound, which improves the memory impairment induced by AF64A through the enhancement of HACU without any side effects at the EDs.

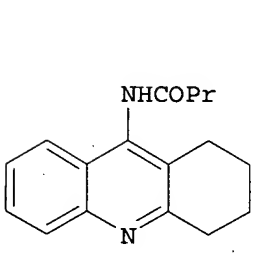
SO Arzneimittel-Forschung (1996), 46(4), 369-373
CODEN: ARZNAD; ISSN: 0004-4172
PY 1996

L4 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN

TI Design and synthesis of 4-(acylamino)pyridine derivatives: novel high affinity choline uptake enhancers. II.

AU Chaki, Haruyuki; Yamabe, Haruko; Sugano, Mamoru; Morita, Shuji; Bessho, Tomoko; Tabata, Reiko; Saito, Ken-Ichi; Egawa, Mitsuo; Tobe, Akihiro; Morinaka, Yasuhiro

GI



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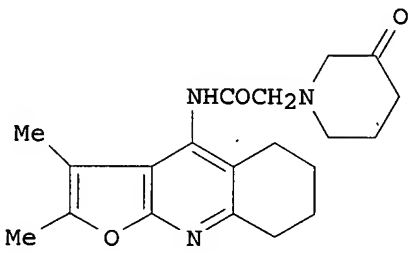


II

AB The synthesis of 4-(acylamino)pyridine derivs. and their high affinity choline uptake improvement activities are described. Acridine derivative I was selected as a lead compound Modification of its ring structure and acyl moiety led to some active compds. Among them, furoquinoline derivative II (MKC-231) showed the highest activity. This compound is expected to be a unique medicine for Alzheimer's disease.

SO Bioorganic & Medicinal Chemistry Letters (1995), 5(14), 1495-500
CODEN: BMCLE8; ISSN: 0960-894X
PY 1995

L4 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN

TI MKC-231, a choline uptake enhancer, ameliorates working memory deficits and decreased hippocampal acetylcholine induced by ethylcholine aziridinium ion in mice

AU Murai, S.; Saito, H.; Abe, E.; Masuda, Y.; Odashima, J.; Itoh, T.

AB The effects of acute and chronic administration of MKC-231, a new choline uptake enhancer, and two other nootropic agents, linopiridine (Dup 996) and tetrahydroaminoacridine (THA) on working memory deficits and decreased hippocampal acetylcholine (ACh) content were studied in a delayed non-matching to sample task, using a T-maze, in ethylcholine aziridinium ion (AF64A)-treated mice. Treatment with AF64A (3.5 nmol, i.c.v.) produced memory deficits and decreased hippocampal ACh content. In acute behavioral expts., MKC-231 and THA had no significant effect on AF64A-induced memory deficits at any doses tested (0.3, 1.0 and 3.0 mg/kg), whereas Dup 996, at a dose of 1.0 mg/kg, significantly improved

memory deficits. In chronic expts., MKC-231 improved memory deficit at all doses tested (0.3, 1.0, or 3.0 mg/kg p.o., once daily for 11 days) and Dup 996 did so only at a dose of 3.0 mg/kg, whereas THA did not improve memory deficit at any doses tested. In acute neurochem. expts., MKC-231 and THA did not reverse the AF64A-induced hippocampal ACh depletion. Dup 996, however, further decreased hippocampal ACh content compared to that in the AF64A-treated group. In chronic expts., MKC-231 significantly reversed hippocampal ACh depletion at doses of 0.3 and 1.0 mg/kg, whereas neither Dup 996 nor THA reversed hippocampal ACh depletion at any doses tested. These results indicate that MKC-231 improved the AF64A-induced working memory deficit and hippocampal ACh depletion, probably by recovering reduced high-affinity choline uptake and ACh release.

SO Journal of Neural Transmission: General Section (1994), 98(1), 1-13
CODEN: JNGSE8; ISSN: 0300-9564

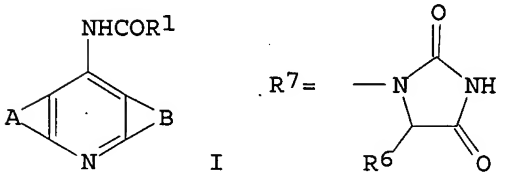
PY 1994

L4 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2007 ACS on STN

TI Preparation of 4-acylaminopyridine derivatives for treatment of Alzheimer's disease

IN Ninomiya, Kunihiro; Saito, Kenichi; Sugano, Mamoru; Tobe, Akihiro; Morinaka, Yasuhiro; Bessho, Tomoko; Harada, Haruko

GI



AB The title compds. I [R1 = C2-C6 alkyl, (CH2)nNR2R3, CHR4CO2R5, NR2R3 = 2-oxo-1-pyrrolidinyl, R7; R2, R3 = independently H, C1-C6 alkyl, C3-C6 cycloalkyl, R4, R5, R6 = independently H, C1-C6 alkyl; n = 0-3; ring A = fused cyclopentyl, cyclohexyl, substituted benzo, substituted thieno, substituted furo, pyrido; ring B = fused cycloalkyl, bicycloalkyl] or a pharmaceutically acceptable acid-added salt thereof were prepared as agents for treatment of Alzheimer's disease. Thus, cyclization of I (R1 = CH2-L-Val-OMe, ring A = benzo, ring B = cyclohexano) (preparation given) gave I [R1 = CH2R7; R6 = (S)-CHMe2] which showed 20% improvement at 10-8 M in a sodium-dependent high-affinity choline uptake ability test.

SO Eur. Pat. Appl., 100 pp.
CODEN: EPXXDW

PY 1991
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                                                          ENTRY    SESSION
FULL ESTIMATED COST                                        42.91     111.27

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)              SINCE FILE      TOTAL
                                                          ENTRY    SESSION
CA SUBSCRIBER PRICE                                       -10.92     -10.92

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DICTIONARY FILE UPDATES:  28 JAN 2007  HIGHEST RN 918629-37-5

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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

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  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

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E4            1     MKC-S/CN
E5            1     MKC7 PROTEASE/CN
E6            1     MKD/CN
E7            1     MKE 301/CN
E8            1     MKF 111/CN
E9            1     MKF 18/CN
E10           1     MKF 186/CN
E11           1     MKF 18U/CN
E12           1     MKF 199/CN
E13           1     MKF 211/CN
E14           1     MKF 29/CN
E15           1     MKF 300/CN
E16           1     MKF 674/CN
E17           1     MKF 726/CN
E18           1     MKF 728/CN
E19           1     MKF 736/CN
E20           1     MKF 740/CN
E21           1     MKF 790/CN
E22           1     MKFK/CN
E23           1     MKG/CN
E24           1     MKG 11/CN
E25           1     MKH/CN

=> E "MKC 231"/CN 25
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E2            1     MKC 1PH/CN
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E20           1     MKC SILICATE MS 56SB5/CN
E21           1     MKC SILICATE MS 56SB5, POLYMER WITH
A-HYDRO-Ω-HYDROXYPOLY(OXY-1,2-ETHANEDIYL)/CN
E22           1     MKC SILICATE MS 56SB5, POLYMER WITH 2-HYDROXYETHYL
2-METHYL-2-PROPENOATE, METHYL 2-METHYL-2-PROPENOATE AND 2-PROPENOIC ACID/CN
E23           1     MKC SILICATE MS 57/CN
E24           1     MKC SILICATE MS 58B15/CN
E25           1     MKC SILICATE MS 58B30/CN

=> S E3
L5            1 "MKC 231"/CN

=> DIS L5 1 IDE

L5   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2007 ACS on STN
RN   135463-81-9  REGISTRY
ED   Entered STN:  09 Aug 1991
CN   1-Pyrrolidineacetamide, 2-oxo-N-(5,6,7,8-tetrahydro-2,3-dimethylfuro[2,3-
     b]quinolin-4-yl)- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Furo[2,3-b]quinoline, 1-pyrrolidineacetamide deriv.
OTHER NAMES:
CN   Coluracetam
CN   MKC 231
MF   C19 H23 N3 O3
SR   CA
LC   STN Files:   ADISINSIGHT, BIOSIS, BIOTECHNO, CA, CAPLUS, CIN, EMBASE,
       IMSDRUGNEWS, IMSRESEARCH, MEDLINE, PHAR, PROMT, PROUSDDR, SCISEARCH,
       SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL
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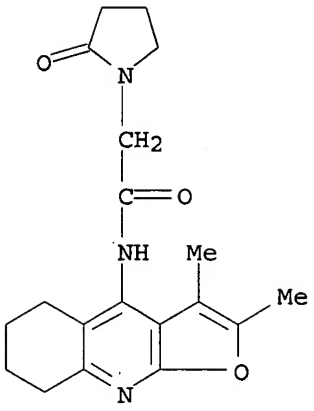

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

14 REFERENCES IN FILE CA (1907 TO DATE)
14 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	7.80	119.07

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-10.92

FILE 'CAPLUS' ENTERED AT 15:28:00 ON 29 JAN 2007
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FILE COVERS 1907 - 29 Jan 2007 VOL 146 ISS 6
FILE LAST UPDATED: 28 Jan 2007 (20070128/ED)

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=> d his

(FILE 'HOME' ENTERED AT 15:20:55 ON 29 JAN 2007)

FILE 'REGISTRY' ENTERED AT 15:21:09 ON 29 JAN 2007
L1 STRUCTURE UPLOADED
L2 0 S L1 FAM SAM

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L3            1 S L1 FAM FULL

     FILE 'CAPLUS' ENTERED AT 15:22:17 ON 29 JAN 2007
L4           14 S L3

     FILE 'REGISTRY' ENTERED AT 15:26:44 ON 29 JAN 2007
                E "MKC-231"/CN 25
                E "MKC 231"/CN 25
L5            1 S E3

     FILE 'CAPLUS' ENTERED AT 15:28:00 ON 29 JAN 2007

=> s l4 or 135463-81-9 or mkc-231 or mkc(a)231
   REG1stRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

L7           14 L6


            399 MKC
              2 MKCS
            400 MKC
                  (MKC OR MKCS)
          20307 231
              9 MKC-231
                  (MKC(W)231)
            399 MKC
              2 MKCS
            400 MKC
                  (MKC OR MKCS)
          20307 231
              9 MKC(A)231
L8           15 L4 OR L7 OR MKC-231 OR MKC(A)231


=> d ti au so py 1-15

L8   ANSWER 1 OF 15  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   "Lead Hopping". Validation of Topomer Similarity as a Superior Predictor
     of Similar Biological Activities
AU   Cramer, Richard D.; Jilek, Robert J.; Guessregen, Stefan; Clark, Stephanie
     J.; Wendt, Bernd; Clark, Robert D.
SO   Journal of Medicinal Chemistry (2004), 47(27), 6777-6791
     CODEN: JMCMAR; ISSN: 0022-2623
PY   2004

L8   ANSWER 2 OF 15  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Fused pyridine derivative used as therapeutic agent for schizophrenia
IN   Bessho, Tomoko; Takashina, Ken
SO   PCT Int. Appl., 31 pp.
     CODEN: PIXXD2
PY   2004
     2004
     2005
     2006
     2006
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L8 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
TI Preventives/remedies for cholinergic neuropathy
IN Takashina, Ken; Bessho, Tomoko
SO PCT Int. Appl., 57 pp.
CODEN: PIXXD2
PY 2003
2003
2004
2004

L8 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
TI Polymorph forms of n-(2,3-dimethyl-5,6,7,8-tetrahydrofuro[2,3-b]quinolin-4-yl)-2-(2-oxopyrrolidin-1-yl)acetamide
IN Yamabe, Haruko; Ishige, Takanori
SO PCT Int. Appl., 35 pp.
CODEN: PIXXD2
PY 2002
2002
2004
2004
2004
2004
2005

L8 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
TI 4-Acylaminotetrahydrofuro[2,3-b]quinoline derivatives for prevention and treatment of ischemic retinopathy and retinal and optic nerve injury
IN Togawa, Shunji; Mano, Tomiya; Yano, Shinji
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
PY 2001

L8 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
TI MKC-231, Mitsubishi-Tokyo Pharmaceutical Inc
AU Chen, Yun
SO Current Opinion in Central & Peripheral Nervous System Investigational Drugs (2000), 2(4), 461-466
CODEN: COCDFA; ISSN: 1464-844X
PY 2000

L8 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
TI MKC-231 for treatment of Alzheimer's disease
AU Takashina, Ken
SO Rinsho to Yakubutsu Chiryo (2000), 19(1), 29-32
CODEN: RYCHEI; ISSN: 0913-7505
PY 2000

L8 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
TI Central nervous system-mediated hyperglycemic effects of NIK-247, a cholinesterase inhibitor, and MKC-231, a choline uptake enhancer, in rats
AU Uemura, Kazumasa; Yoshioka, Shuko; Surina-Baumgartner, Denise M.; Tamagawa, Tatsuo; Miura, Hisayuki; Ueda, Muneto; Tamaya, Norika; Iguchi, Akihisa; Hotta, Nigishi
SO Japanese Journal of Pharmacology (1999), 79(1), 113-115
CODEN: JJPAAZ; ISSN: 0021-5198
PY 1999

L8 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
TI Protective effect of MKC-231, a novel high affinity choline uptake enhancer, on glutamate cytotoxicity in cultured cortical neurons
AU Akaike, Akinori; Maeda, Takehiko; Kaneko, Satoshi; Tamura, Yutaka
SO Japanese Journal of Pharmacology (1998), 76(2), 219-222

CODEN: JJPAAZ; ISSN: 0021-5198
PY 1998

L8 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
TI Acyltetrahydrofuroquinoline derivs. for prevention and treatment of mental disorders from impairment of brain cholinergic system
IN Saito, Kenichi; Betsusho, Tomoko; Chaki, Haruyuki; Egawa, Mitsuo
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
PY 1996

L8 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
TI Effect of the novel high affinity choline uptake enhancer 2-(2-oxopyrrolidin-1-yl)-N-(2,3-dimethyl-5,6,7,8-tetrahydrofuro[2,3-b]quinolin-4-yl)acetamide on deficits of water maze learning in rats
AU Bessho, Tomoko; Takashina, Ken; Tabata, Reiko; Ohshima, Chieko; Chaki, Haruyuki; Yamabe, Haruko; Egawa, Mitsuo; Tobe, Akihiro; Saito, Ken-Ichi
SO Arzneimittel-Forschung (1996), 46(4), 369-373
CODEN: ARZNAD; ISSN: 0004-4172
PY 1996

L8 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
TI Syntheses and structure-activity relationship of 4-acylaminopyridine derivatives: Novel high affinity choline uptake enhancers.
AU Chaki, Haruyuki; Yamabe, Haruko; Sugano, Mamoru; Morita, Shuji; Bessho, Tomoko; Tabata, Reiko; Saito, Ken-Ichi; Egawa, Mitsuo; Tobe, Akihiro; Morinaka, Yasuhiro
SO Book of Abstracts, 210th ACS National Meeting, Chicago, IL, August 20-24 (1995), Issue Pt. 2, MEDI-146 Publisher: American Chemical Society, Washington, D. C.
CODEN: 61XGAC
PY 1995

L8 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
TI Design and synthesis of 4-(acylamino)pyridine derivatives: novel high affinity choline uptake enhancers. II.
AU Chaki, Haruyuki; Yamabe, Haruko; Sugano, Mamoru; Morita, Shuji; Bessho, Tomoko; Tabata, Reiko; Saito, Ken-Ichi; Egawa, Mitsuo; Tobe, Akihiro; Morinaka, Yasuhiro
SO Bioorganic & Medicinal Chemistry Letters (1995), 5(14), 1495-500
CODEN: BMCLE8; ISSN: 0960-894X
PY 1995

L8 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
TI MKC-231, a choline uptake enhancer, ameliorates working memory deficits and decreased hippocampal acetylcholine induced by ethylcholine aziridinium ion in mice
AU Murai, S.; Saito, H.; Abe, E.; Masuda, Y.; Odashima, J.; Itoh, T.
SO Journal of Neural Transmission: General Section (1994), 98(1), 1-13
CODEN: JNGSE8; ISSN: 0300-9564
PY 1994

L8 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2007 ACS on STN
TI Preparation of 4-acylaminopyridine derivatives for treatment of Alzheimer's disease
IN Ninomiya, Kunihiro; Saito, Kenichi; Sugano, Mamoru; Tobe, Akihiro; Morinaka, Yasuhiro; Bessho, Tomoko; Harada, Haruko
SO Eur. Pat. Appl., 100 pp.
CODEN: EPXXDW
PY 1991
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=> s 135463-81-9
   REG1stRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.




L10         14 L9


=> s schizophreni?
L11      17183 SCHIZOPHRENI?

=> d his

     (FILE 'HOME' ENTERED AT 15:20:55 ON 29 JAN 2007)

     FILE 'REGISTRY' ENTERED AT 15:21:09 ON 29 JAN 2007
L1              STRUCTURE UPLOADED
L2            0 S L1 FAM SAM
L3            1 S L1 FAM FULL

     FILE 'CAPLUS' ENTERED AT 15:22:17 ON 29 JAN 2007
L4           14 S L3

     FILE 'REGISTRY' ENTERED AT 15:26:44 ON 29 JAN 2007
                E "MKC-231"/CN 25
                E "MKC 231"/CN 25
L5            1 S E3

     FILE 'CAPLUS' ENTERED AT 15:28:00 ON 29 JAN 2007
                S L4 OR  135463-81-9/REG# OR MKC-231 OR MKC(A)231

     FILE 'REGISTRY' ENTERED AT 15:29:09 ON 29 JAN 2007
L6            1 S 135463-81-9/RN

     FILE 'CAPLUS' ENTERED AT 15:29:10 ON 29 JAN 2007
L7           14 S L6
L8           15 S L4 OR L7 OR MKC-231 OR MKC(A)231
                S 135463-81-9/REG#

     FILE 'REGISTRY' ENTERED AT 15:30:28 ON 29 JAN 2007
L9            1 S 135463-81-9/RN

     FILE 'CAPLUS' ENTERED AT 15:30:29 ON 29 JAN 2007
L10          14 S L9
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L11        17183 S SCHIZOPHRENI?

=> s l8 and l11
L12            1 L8 AND L11

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